IN THE CLAIMS

Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1. (Original) A method comprising:

allocating a first portion of a first memory as a static section to store a main program which uses functional programs stored in a second memory; and

allocating a second portion of the first memory as a dynamic section to store other programs, the dynamic section including a plurality of overlay spaces to overlay the functional programs loaded from the second memory to conserve memory capacity of the first memory.

2. (Original) The method of claim 1, wherein the allocating of the overlay spaces is determined by similar functions performed by the functional programs that are to be loaded into the overlay spaces.

3. (Original) The method of claim 1, wherein in allocating the overlay spaces, individual overlay spaces have entry and exit points for functional programs loaded into respective overlay spaces.

4. (Original) The method of claim 1, further comprising accessing a functional program from the main program by specifying a resource identifier to identify a particular functional program and an entry address to identify an entry point into one of the overlay spaces.

5. (Original) The method of claim 1, wherein the allocating of the first and second portions are allocated on the first memory resident on an integrated circuit and the functional programs to be loaded into the overlay spaces are resident on the second memory external to the integrated circuit.

6. (Previously Presented) A method comprising:

executing a program statement of a main program to perform a particular functional operation by identifying a corresponding functional program using a resource identifier and by specifying an entry point into one of the overlay spaces;

using the resource identifier to identify a corresponding functional program to perform the particular functional operation;

loading the functional program into an overlay space specified by the specified entry point by:

loading the functional program into a specified overlay space assigned to program functions having similar performing tasks; and

loading the resource identifier into a register and reading the register to call the functional program into the specified overlay space; and

executing the functional program in the overlay space.

Claims 7-8. (Cancelled)

9. (Currently Amended) The method of ~~claim 8~~ claim 6, wherein executing the functional program also includes calling at least one other functional program, in which functional programs are nested for overlaying.

10. (Currently Amended) The method of ~~claim 8~~ claim 6, further comprising returning to the main program after executing the functional program in the overlay space.

11. (Original) An apparatus comprising:

a first memory having a first portion as a static section to store a main program which uses functional programs and a second portion as a dynamic section to store other programs which reside in the first memory for a shorter duration than the main program, the dynamic section including a plurality of overlay spaces to overlay functional programs; and

a second memory operably coupled to store the functional programs and to load a functional program specified by a resource identifier in the main program to a corresponding overlay space specified by an entry point specified by the main program.

12. (Original) The apparatus of claim 11, wherein the first memory is a random access memory resident in an integrated circuit and the second memory is an external memory to the integrated circuit.

13. (Original) The apparatus of claim 12, wherein the second memory is larger in capacity than the first memory, but in which the functional programs are loaded into the overlay spaces to allow overlay in use of the functional programs.

14. (Original) The apparatus of claim 13, wherein individual overlay spaces are assigned to load program functions having similar performing tasks.

15. (Original) A multi-function handheld device comprising:

a system on a chip integrated circuit that includes an internal memory arranged to have a first portion as a static section to store a main program which uses functional programs and a second portion as a dynamic section to store other programs which reside in the internal memory for a shorter duration than the main program, the dynamic section including a plurality of overlay spaces to overlay the functional programs; and

an external memory operably coupled to the integrated circuit to store the functional programs and to load a functional program specified by a resource identifier in the main program to a corresponding overlay space specified by an entry point specified by the main program.

16. (Original) The multi-function handheld device of claim 15, wherein the internal memory is a random access memory and the external memory is a flash memory device.

17. (Original) The multi-function handheld device of claim 15, wherein the external memory is larger in capacity than the internal memory, but in which the functional programs are loaded into the overlay spaces to allow overlay in use of the functional programs.

18. (Original) The multi-function handheld device of claim 15, wherein the functional programs are assigned to a particular overlay space based on having similar performing tasks.

19. (Original) The multi-function handheld device of claim 15, wherein the integrated circuit includes a register to load resource identifiers, which are then read to load the functional programs.